

## **REMARKS/ARGUMENTS**

Claims 1, 21, 23-25, and 27-28 are amended. Support for the amendment can be found at, e.g., paragraph 0024 of the present application as published. No new matter is added. Upon entry of the above amendments, claims 1-3, 8-11, 13-14, 16-17, and 20-28 are pending. Reconsideration of the present application is respectfully solicited in view of the above amendments and the following remarks.

### **I. Specification**

The specification is objected to because the Examiner deems that "NT modification" at page 7, line 5 of the specification is not understood and should be either LT or HT. NT stands for "Neidertermperatur" in German, which means "low temperature." Applicants have now amended "NT modification" in the specification to "LT modification" and therefore overcome the Examiner's objection to the specification.

### **II. Claim Rejections under 35 U.S.C. § 112**

Claims 23-24 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

Specifically, with regard to claims 23-24, the Examiner states that the expression "a proportion of the SiN group in the empirical formula for said first phosphor is replaced by AlO" is not understood because there is no SiN group identified in the formula of the first phosphor  $M_{(1-e)}Si_2O_2N_2:D_c$ . As explained in Applicants' previously submitted Amendment, a person of ordinary skill in the art would have no difficulty to understand the expression questioned by the Examiner based on claims 23-24 themselves. However, to facilitate the prosecution of the present application, Applicants have now amended claims 23 and 24 to recite that: 1) a

proportion of the Si atoms in the empirical formula for said first phosphor are replaced by Al atoms; 2) a proportion of the N atoms in the empirical formula for said first phosphor are replaced by O atoms; and 3) the proportion of the Si atoms that are replaced by the Al atoms and the proportion of the N atoms that are replaced by the O atoms are in the same molar amount.

The Examiner's rejection of claims 23-24 is moot in view of the current amendments to claims 23-24. Applicants respectfully request that the rejections of claims 23-26 under 35 U.S.C. § 112, second paragraph, be withdrawn.

### **III. Claim Rejections under 35 U.S.C. § 103**

#### **A. Rejection of claims 1-3, 9-11, 13, 20, and 28 under 35 U.S.C. §103(a) as being unpatentable over Mueller, in view of the present application itself**

Claims 1-3, 9-11, 13, 20, and 28 have been rejected under 35 U.S.C. §103(a) as being obvious over Mueller (USP 6,717,353) in view of the present application itself. Reconsideration and withdrawal of this rejection are respectfully requested.

As explained in Applicants' previously submitted Amendment, to arrive at the present invention from Mueller as proposed by the Examiner, one must pick and select from an infinite number of possibilities. One of ordinary skill in the art would not arrive at the present invention from Mueller, as proposed by the Examiner, without undue experimentation. In response, the Examiner continues to argue that it would be obvious to pick a specific value from the range of Mueller. *See* pages 14-16 of the Office Action. However, the Examiner fails to consider that there are a number of variables here, and picking and selecting a specific value or range for each of these variables would result in an infinite number of different combinations.

Nevertheless, in order to advance prosecution of the present application, Applicants have now amended independent claims 1 and 28 so that claims 1 and 28 both recite "the

oxynitridosilicate comprising less than 100 ppm tungsten impurity and less than 100 ppm cobalt impurity.” Mueller does not teach, disclose, or suggest this new limitation added to claims 1 and 28. Therefore, claims 1 and 28 are patentable in view of Mueller under 35 U.S.C. §103(a). For at least the same reasons, claims 2-3, 9-11, 13, and 20 are all patentable in view of Mueller under 35 U.S.C. §103(a).

It is noted that a similar amendment was submitted in a related U.S. Application No. 10/572,891 (our Attorney Docket No. 502902-225PUS) and resulted in allowance of that application. The claims of the present application are different from those of U.S. Application No. 10/572,891 in several respects.

Based on the foregoing, Applicants respectfully request that the rejection of claims 1-3, 9-11, 13, 20, and 28 under 35 U.S.C. §103(a) be withdrawn.

**B. Rejection of claims 8, 16, and 17 under 35 U.S.C. §103(a) as being unpatentable over Mueller as applied to claim 1 above, in view of Bischoff**

Claims 8, 16 and 17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of Bischoff (USP 6,158,882).

This obviousness rejection relies on Mueller as the primary reference in combination with Bischoff as the secondary reference. Bischoff is cited to demonstrate that certain additional features recited in dependent claims have been known in the art. Bischoff cannot remedy the deficiencies discussed above in connection with claim 1. Therefore, a combination of the primary reference Mueller with Bischoff would not lead to the invention recited in any claim that depends from independent claim 1, including claims 8, 16, and 17. Withdrawal of this obviousness rejection is, therefore, respectfully requested.

**C. Rejection of claim 14 under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of Ellens.**

Claim 14 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of Ellens (USP 2002/0105269).

This rejection relies on Mueller as the primary reference in combination with Ellens as the secondary reference. Ellens is cited to demonstrate that certain additional features recited in dependent claim 14 have been known in the art. Ellens cannot remedy the deficiencies discussed above in connection with claim 1. Therefore, a combination of the primary reference Mueller with Ellens would not lead to the invention recited in any claim that depends from independent claim 1, including claim 14. Withdrawal of this obviousness rejection is, therefore, respectfully requested.

**D. Rejection of claims 21-22 and 25-27 under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of Ellens.**

Claims 21-22 and 25-27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of Ellens (USP 2002/0105269).

Independent claims 21, 25 and 27 are amended so that they recite: "the oxynitridosilicate comprising less than 100 ppm tungsten impurity and less than 100 ppm cobalt impurity." Neither Mueller nor Ellens teaches, discloses, or suggests this new limitation added to claims 21, 25, and 27. Therefore, claims 21, 25, and 27 are also patentable over Mueller and Ellens under 35 U.S.C. §103(a). For at least the same reasons, claim 22, which depends from claim 21, and claim 26, which depends from claim 15, are also both patentable over Mueller and Ellens under 35 U.S.C. §103(a). Withdrawal of the obviousness rejection of claims 21-22 and 25-27 is, therefore, respectfully requested.

#### **IV. Claim Rejections under 35 U.S.C. § 102 (e)**

Claims 23 and 24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Muller. Applicants respectfully disagree.

The Examiner interprets that the additional claim limitation concerning SiN is drawn to a precursor material and, therefore, does not distinguish claims 23 and 24 over Mueller. As discussed above, Applicants have now amended claims 23 and 24 so that they recite that 1) a proportion of the Si atoms in the empirical formula for said first phosphor are replaced by Al atoms; 2) a proportion of the N atoms in the empirical formula for said first phosphor are replaced by O atoms; and 3) the portion of the Si atoms that are replaced by the Al atoms and the portion of N atoms that are replaced by the O atoms are in the same molar amount. These features are not disclosed by Muller. Therefore, claims 23-24 are not anticipated under 35 U.S.C. § 102(e) by Mueller. Withdrawal of the rejection of claims 23-24 is, therefore, respectfully requested.

#### **CONCLUSION**

Based on the foregoing, it is believed that the present application has been placed in condition for allowance. Early and favorable consideration is respectfully requested.

Respectfully submitted,  
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